

Notice of Allowability	Application No.	Applicant(s)	
	10/655,777	BECK ET AL.	
	Examiner	Art Unit	
	Emmanuel Sayoc	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the election filed 11/23/2005.
2. ☒ The allowed claim(s) is/are 25-53.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☒ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 20060209.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20060209</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>7/07/05</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Leonard Kalinowski on 02/08/2006.

The application has been amended as follows:

Non-elected and withdrawn claims 1-23, and 54 are hereby cancelled.

Drawings

2. The informal drawings are of sufficient quality for examination purposes only. Accordingly since the application is allowed, new formal drawings are required. Failure to timely submit new formal drawings at the time of allowance will result in **ABANDONMENT** of the application.

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: the prior art neither discloses nor makes obvious the combination set forth in the claims by not disclosing a method of optimizing the performance of a rod pump including a rod string carrying a downhole pump, and a variable drive coupled to the rod string, with the

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method steps of determining or calculating both torque and velocity of the rod pump, using torque and velocity to calculate operating parameters, using operating parameters to produce command signals, and using the signals to vary the velocity of the downhole pump such that the pump closely follows the polished rod position while limiting tensile and compressive forces excursions in the rod load string being reciprocated.

Westerman et al. (U.S. 5,362,206) and London et al. (U.S. 5,372,482) teach a rod pump control means where the phase difference between voltage and current is used to determine pump load. There is no teaching of determining torque or velocity via motor voltage and current or the limiting of tensile and compressive forces excursions in the rod load string.

Diederich (U.S. 5,281,100) and McTamaney et al. (U.S. 4,509,901) teach rod pump control means where the pump position is used as an indication of pump velocity. There is no teaching of determining torque via motor voltage and current or the limiting of tensile and compressive forces excursions in the rod load string.

Jeun (U.S. 2003/0180151 A1) teaches a rod pump control means where the pump motor voltage and current is used to determine pump position and velocity. There is no teaching of determining torque via motor voltage and current or the limiting of tensile and compressive forces excursions in the rod load string.

Bosley et al. (U.S. 5,281,100) teaches a rod pump where a control system utilizes the phase relationship of the pump-jack oil well induction motor voltage and current to both measure the resonant velocities of the down hole rod string and to damp these resonances with appropriate modulations in the torque of the induction motor.

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There is no teaching of determining torque via motor voltage and current or the limiting of tensile and compressive forces excursions in the rod load string.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Sayoc whose telephone number is (571) 272 4832. The examiner can normally be reached on M-F 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on (571) 272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Emmanuel Sayoc
Examiner
Art Unit 3746

ECS


CHARLES C. FREAY
PRIMARY EXAMINER